

DELAWARE STATE MEDICAL JOURNAL

Owned and Published by the Medical Society of Delaware
Issued Monthly Under the Supervision of the Publication Committee

Volume XII
Number 2

FEBRUARY, 1940

Per Year \$2.00
Per Copy 20c

DIFFICULTIES IN THE EARLY DIAGNOSIS OF PRIMARY CANCER OF THE LUNG*

JOHN T. BAUER, M. D.**
Philadelphia, Pa.

Among the numerous reports on primary cancer of the lung which have appeared during the past two decades, the monograph by Simons (1) in 1937 practically "embraces the subject in its entirety" (Myers (2)). What I may say therefore with regard to the diagnosis and treatment of this disease is dwarfed by this work. It may be presumptuous for a pathologist who deals essentially with the terminal aspects of disease to attempt to discuss a disease in its early stages. However, despite the rarity with which the pathologist encounters disease in its incipient stage in contrast to the frequency with which the internist or general practitioner sees it, a careful study of established cases from the earliest symptoms to the necropsy table offers good opportunities for comparing clinical data with anatomical changes. For this reason, therefore, instead of reviewing what others have observed and reported about cancer of the lung, this discussion will be restricted to a few of the diagnostic problems exemplified by some of the cases we have studied at the Pennsylvania Hospital. The cases selected are those of patients in whom the diagnosis was established by necropsy, which, as will be shown, at times disclosed an unsuspected primary cancer of the lung. In all, since the opening of the Laboratory in 1899, 35 cases of primary cancer of the lung have been found in the series of over 6200 necropsies. This figure represents about 0.6 per cent. of all necropsies and about 6.1 per cent. of the necropsies showing malignant tumors. Before summarizing the findings of this series, some of the individual cases will be presented in order to call atten-

tion to the difficulties that may be encountered in establishing an early diagnosis. The roentgenograms which illustrate them were selected by my colleague, Dr. Bishop, to whom I am indebted for interpretations.

CASE 1

Asymptomatic and totally unsuspected bronchiogenic carcinoma of the left lower lobe of lung with metastasis to regional lymph nodes.

The patient, a white man of 67 years, suffered from a strangulated hernia which necessitated operation. Death resulted from acute diffuse peritonitis. He had no symptoms of pulmonary disease. Slight impairment to percussion posteriorly, somewhat diminished breath sounds and wheezes at the bases of an otherwise emphysematous chest could hardly be regarded with suspicion. Roentgenograms of the chest were not made, yet had they been, the outlines of the small neoplastic mass (about 2.5 to 3.0 cm. in diameter) near the hilum might have been obscured by the cardiac shadow. Here then is an example of cancer of the lung which had not as yet produced sufficient obstruction of the bronchus to cause atelectasis or permit infection but had already extended to the regional lymph nodes.

CASE 2

Bronchiogenic carcinoma with necrosis and large abscess of right upper lobe resulting from occlusion of a branch of the pulmonary artery but without metastasis.

This man, of the same age as that of Case 1, lost about 20 pounds in 2 years, and suffered from recent weakness and a cough of 3 months' duration. He was emaciated, coughed incessantly, expectorated much purulent sputum occasionally tinged with blood. Expansion was reduced over the right apex, and vocal fremitus and resonance were increased. The percussion note was tympanitic. Breath

*Read before the Medical Society of Delaware, Wilmington, October 11, 1939.

**Director, Ayer Clinical Laboratory, Pennsylvania Hospital.

sounds were blowing, almost cavernous. Roentgenograms revealed a large irregular cavity in the upper part of the right lung surrounded by a zone of increased density. The trachea was deviated to the right. Death occurred shortly after admission. The carcinoma which encircled the bronchus constricted a branch of the pulmonary artery which probably facilitated the formation of the abscess in the upper lobe. The margin was chronically inflamed and the pleura was thickened. Despite the extensive local destruction brought about by the tumor, no metastasis occurred. The clinical findings were essentially those of a pulmonary abscess except for the fact that the patient gave no history of pneumonia or other acute condition which may be followed by an abscess of the lung.

CASE 3

Large well circumscribed carcinoma in depths of right lower lobe, without metastasis.

The patient suffered from asthenia, loss of weight and dyspnea for two years but gave no other respiratory symptoms except a chronic cough of 20 years standing. His fingers were clubbed. Dullness to percussion was observed posteriorly over the right lower half of the chest. No rales were heard. Changes at the apex suggested old tuberculosis which was confirmed at necropsy. The tumor was quite large, fairly well circumscribed and had not metastasized. The central portion of the tumor was necrotic. Patients with pulmonary tumors like this would probably be greatly benefited by pneumonectomy.

CASE 4

Infiltrating carcinoma of left bronchus with occlusion of lumen and formation of pulmonary abscess distal to stenosis, with metastasis to suprarenal glands and ribs.

The patient, a man 65 years old, lived 5½ months after the onset of illness which began with the symptoms of weakness, pain in the chest and cough with blood-tinged sputum. The fingers were clubbed. The marked degree of infiltration suggested by the roentgenograms and the location of the tumor and its fixation which were noted by Dr. Clerf, the bronchoscopist, made the diagnosis easy, but unfortunately too late for effective surgical

treatment. Irradiation was partially beneficial in clearing some of the associated infection and inflammation.

CASE 5

Bronchiogenic carcinoma of left lower lobe masked by symptoms of heart disease.

The patient, 67 years old, complained of dyspnea, orthopnea and edema of the ankles for several years. He was extremely ill, cyanotic and died shortly after admission. The presence of pulmonary edema prevented a careful physical examination of the chest. At necropsy the left lower lobe bronchus was almost completely occluded. Widespread metastasis to the pancreas, liver, suprarenal glands and brain was noted. Obviously an early diagnosis would have been impossible without a roentgenogram before or at the onset of symptoms.

CASE 6

Unsuspected bronchiogenic carcinoma associated with pneumococcic empyema.

This 70-year-old man was admitted to the hospital with a fracture of the neck of the femur. For a month and a half he was fairly well except for increasing loss of weight, asthenia, occasional cough and an irregular low fever. Then he developed empyema (pneumococcus type III) which was drained but the symptoms continued until death about 4 months later. The dense fibrous wall of the empyema cavity and of an abscess of the lung contained strands of cancer cells. A few scattered nodules were present in the liver. In this case, cough was the only respiratory symptom that existed. His age, the increasing asthenia, and the loss of weight should have suggested that the patient was suffering from a second disease as well as from the fracture of the femur.

CASE 7

Bronchiogenic carcinoma with widespread metastasis producing symptoms suggestive of gastric or hepatic cancer.

This man of 54 years complained of indefinite pain in the back and legs, fever and night sweats for 2½ months. He had a slight cough when smoking and almost insignificant pain in the chest 2 weeks before admission. These were the only respiratory symptoms. He was

undernourished and weak. Slight impairment to percussion and distant breath sounds were noted over the right apex. Occasional rales were heard at the bases of the lungs. Because of a moderate degree of anemia, achlorhydria and increasing jaundice, the possibility of cancer of the stomach with metastasis to the liver was thought most likely. At necropsy, diffuse meastatic nodules were seen in the liver, suprarenals, kidneys, spleen, pancreas and lymph nodes about the pancreas. The primary source was in the right upper lobe, where the tumor displaced the innominate and right common carotid arteries upward and forward. Note again the meagre respiratory symptoms.

CASE 8

Unsuspected bronchiogenic carcinoma with symptoms due to metastasis to the lumbar spinal cord.

The patient, a man 47 years old, complained of fecal and urinary incontinence of 5 weeks' duration. He had had a chronic cough for more than 3 years. He was emaciated. The right supraclavicular and left anterior cervical lymph nodes were enlarged. The lower left lung was the site of a huge carcinoma which had metastasized to the liver, to the cerebellum and lumbar spinal cord. Lesions in the last were the cause of the paralysis of the bladder and rectum.

CASE 9

Bronchiogenic carcinoma of right upper lobe with symptoms due to abdominal and retroperitoneal metastasis.

This man, 57 years old, complained of pain in the sacral region for 2 months. He never had symptoms or signs referring to the lungs. Jaundice occurred and rapidly increased; he became weak, dyspneic and died about 4 months after the onset. A carcinoma of the right upper lobe was disclosed at necropsy, with metastasis to the suprarenals, pancreas, kidneys, second lumbar vertebra and lymph nodes. In this case the pathologist at the time thought that the tumor originated in the suprarenals, but subsequent study refutes this. However, we can readily understand what difficulties confront the clinician when the pathologist is unable to determine the exact origin of a neoplasm.

CASE 10

Bronchiogenic carcinoma with metastasis to the brain giving rise to symptoms of encephalitis.

A policeman, 41 years old, complained of weakness, dizziness, headache, cough, hemoptysis and night sweats. The percussion note was dull over the right apex and base. Roentgen examination revealed an area of uniform density over the right lung sharply limited by what seemed to be a thickened interlobar pleura. He developed diplopia, paralysis of both external rectus muscles of the eye and ptosis of the right upper eyelid. These led to the belief that he suffered from encephalitis. However, when signs of fluid appeared at the right base, and sanguinopurulent fluid and carcinomatous tissue were removed, a correct diagnosis was established. At necropsy, a carcinoma of the right bronchus was found. It had extended to the pleura and had metastasized to the pancreas, kidneys, omentum, suprarenals, liver, brain, hypophysis, pineal gland, diaphragm, thoracic wall and regional lymph nodes. Had this patient been observed today instead of in 1927, the symptoms would have led promptly to the diagnosis of pulmonary cancer.

CASE 11

Carcinoma of the lung with involvement of the mediastinum.

The patient, a man 44 years old, complained of severe pain in the chest and shoulders associated with increasing dysphagia. Elsewhere a diagnosis of gastric ulcer and arthritis of the spine was made. For the latter a brace had been applied to the back with slight temporary improvement. His symptoms progressed for six months before his admission to the Pennsylvania Hospital. Loss of weight, venous engorgement of the face, neck and arms, and later paralysis of the vocal cords were observed. Roentgenologically a widening of the mediastinal shadow above the arch of the aorta was noted. A mediastinal tumor was suspected and a biopsy revealed inoperable carcinoma. Toward the end he began to cough and expectorated a little bloody sputum. The symptoms were essentially due to the pressure of the tumor upon the mediastinal structures. At necropsy, however, a little

neoplastic ulcer of the right bronchus was seen near the carina. This appeared to be the only source of the carcinoma. Its cellular arrangement suggested an origin from the bronchial glands. Metastasis to the suprarenals, kidneys, spleen, pericardium and endocardium was noted. Intensive irradiation was not effective.

CASE 12

Carcinoma of the lung simulating carcinoma of the esophagus.

The symptoms in this patient were similar in many respects to those just mentioned. Dysphagia, however, was much more pronounced so that toward the end he was unable to take fluids. This could readily be explained for at necropsy the tumor had invaded the esophagus and almost completely occluded the lumen. A differential diagnosis between carcinoma of the lung and carcinoma of the esophagus would have been difficult if not impossible during life. The appearance of the tumor, its metastasis to the suprarenals, left kidney and brain are not characteristic, in our experience, of esophageal carcinomas.

These brief reports from our series reveal the varied and often vague clinical symptoms which may be produced by primary cancer of the lung. Fortunately, however, the disease may be suspected in a majority of instances because of symptoms referring directly to the respiratory tract. Thus, in our series of 35 cases, cough, thoracic pain, emaciation, irregular-usually low-fever, and dyspnea were observed in a majority. The frequency of some of these symptoms together is shown in Table I.

TABLE I
Frequency of Symptom Complexes in
35 Fatal Cases

No. of Patients	Symptom Complexes
11	Cough, thoracic pain, without hemoptysis
10	Cough, thoracic pain with hemoptysis
8	Cough, no thoracic pain (5 with hemoptysis)
6	No cough (2 with pain; 1 with pain and hemoptysis)

Some of these symptoms appeared late in the course of illness, so that from the standpoint of early diagnosis, the first symptoms or chief complaints for which the patients

sought medical treatment are more important. In our series some of those directly referring to the respiratory system are tabulated (Table II).

TABLE II
Incidence of "Chief Complaints"

No. of Patients	Complaint
10	Thoracic Pain*
10	Cough*
5	Thoracic pain and cough*

*Alone or with other symptoms not mentioned.

Thus, in 25 patients, thoracic pain, cough or thoracic pain and cough were the chief complaints. Hence the importance of ascertaining the cause of these symptoms when the patient first seeks medical attention. Another symptom which appeared much earlier, often antedating symptoms which distressed the patient was loss of weight. Wherever a careful record was obtained, loss of weight was mentioned by almost every patient before the onset of other symptoms. In a few exceptions, however, obesity was observed at death.

Physical findings were frequently those of pulmonary atelectasis or pleural effusions and will not be discussed. Indeed there seems to be no early pathognomic physical finding. Supplemented by roentgen examination, however, and by bronchoscopic examination the history and physical examination should lead to a diagnosis in many instances.

The most recent diagnostic aid suggested for the early diagnosis of pulmonary cancer is the examination of sputum for tumor cells. Although the examination of sputum for cancer cells was done before 1900, the following outline recently reported by Barrett was introduced by Dudgeon and Patrick in 1927:

1. Fresh sputum is spread out so that mucus and froth can be separated from the purulent or blood streaked parts. These are selected for examination and spread upon clean glass slides which are placed while wet in Schaudinn's solution. This rapidly fixes the sputum.

2. The slides are removed after 20 minutes or so, the mercurial deposits from Schaudinn's solution on them are removed by Lugol's solution followed by distilled water.

3. Mayer's hemalum is then applied for a few minutes to stain the nuclei. The excess stain is washed away with tap water, and eosin is applied as a diffuse counterstain.

4. Rapid dehydration through alcohols, clearing in xylol and mounting in balsam completes the preparation.

Examination of the stained preparation under the low and high powers of the microscope is made for clumps of neoplastic cells. This method proved of diagnostic value in many instances in the hands of Dudgeon and his associates. For the past year, we have tried this procedure with 23 specimens of sputum from 10 patients, 3 of whom had cancer of the lung. I regret to say that we failed to find cells or groups of cells that could be identified positively as cancer, but as much of this work is still preliminary more experience is necessary before a final opinion can be given.

The detection of cancer of the lung at an early stage is of more than diagnostic importance because within the past few years surgeons have successfully removed the cancerous lung of patients and have thereby prolonged life and in a few instances perhaps have effected a cure. Obviously the chances of cure by this means require the diagnosis of the disease before metastasis occurs. Although metastasis may occur early with little or no evidence of the primary site in the lung, in a number of instances pulmonary symptoms, or more particularly general symptoms such as loss of weight and asthenia, may lead to a diagnosis before metastasis has occurred. In such cases, if the tumor is not at the hilus and is more or less circumscribed without associated pulmonary infection, the patient should be considered a candidate for surgery, providing his general health is good otherwise.

There has been some evidence that intensive irradiation may be of ameliorating if not of curative value. Recently we observed a patient whose life was probably prolonged by this method.

Before concluding, a pathologist should probably say something about the morbid anatomy and histology of primary cancer of the lung. Briefly, therefore, it may be said that the tumor is a trifle more frequently located in the upper than in the lower lobes and

least in the middle lobe. It varies greatly in size and position within the lung or bronchus. The greatest variation is encountered in histologic appearance even in the same tumor. In our series we were unable to correlate histologic appearances with the extent of metastasis or severity of the disease. Both the squamous cell carcinoma which predominated and the so-called oat cell cancer seemed alike in their effects upon the patient. The frequency with which metastatic lesions were encountered in 32 of our cases is shown in Table III.

TABLE III

Frequency of Distribution of Metastasis

Regional Lymph Nodes	22
Liver	13
Suprarenals	10
Opposite Lung	8
Kidneys	7
Retroperitoneal Lymph Nodes, Brain, Bones, each	6
Cervical and Submaxillary Lymph Nodes, Pancreas, each	4
Spleen, Intestines and Mesentery, each	3
Dura Mater, Spinal Cord, Heart, each	2
No Metastasis	5

In conclusion, primary cancer of the lung may occur unrecognized because of the paucity of respiratory symptoms, although cough, thoracic pain, loss of weight, hemoptysis, low fever are usually noted. For the early diagnosis of this disease, it must be recognized that this disease is not rare, that the symptoms may be trivial or misleading and that roentgenography of the chest, although by no means infallible, is an important aid by revealing shadows of masses which cannot be detected on physical examination. Finally, it should be remembered that today surgery probably offers the best chances of cure, and that this depends upon the recognition of the disease before it has spread beyond the affected lung.

REFERENCES

- (1) Simons, Edwin J.: Primary carcinoma of the lung. Year Book Publishers, Inc., Chicago, 1937.
- (2) Myers, J. Arthur: Foreword to Simons' Monograph (1).

DISCUSSION

DR. JOSEPH M. MESSICK (Wilmington): We are particularly fortunate in having this subject presented to us by one who can take from his own files numerous case records to illustrate many of the difficulties encountered, and particularly when that man comes from the

oldest hospital in the United States to talk before one of the oldest medical societies.

The problem of the increasing recorded incidence of bronchogenic carcinoma presents a serious and interesting problem. Treatment is total pneumonectomy. Surgeons have successfully accepted this challenge. The challenge is now up to those of us who first see these patients to deliver them to a surgeon at a time when radical surgery will effect a cure. This implies a careful history and a careful evaluation of what might often seem to be trivial symptoms.

I believe our most useful weapon is a high index of suspicion, just as has been indicated in the early diagnosis of syphilis. Certainly the crux of the problem of pulmonary malignancies lies in its consideration with every patient with obscure symptoms.

Dr. Bauer has indicated that many of these symptoms are not chest symptoms and often the chief complaint does not point to the thorax.

I would like to dwell on one symptom, and that is, cough. In all reports cough has been an outstanding symptom. It is persistent and progressive. Because cough is such a common symptom generally, and is habitual with many people, we will not have everyone bronchoscoped. However, if a patient develops a new, unexplained cough, which does not respond to treatment, or becomes associated with other symptoms, that patient should be bronchoscoped.

We should remember that the x-ray will often fail to reveal a tumor, and we should insist that the patient have the benefit of a bronchoscopic examination.

Examination of the sputum for malignant cells is a highly beneficial procedure. I should like to ask Dr. Bauer what he thinks of its future from a practical standpoint. It would not only aid in early diagnosis, but would clinch the diagnosis, in those cases in which the diagnosis already seems fairly well established.

During the past year I have had the privilege of seeing two patients with pulmonary malignancy. I thought you might be interested in seeing the films on one of them, first, because we have films made at routine, annual

physical examinations going back to 1933, and second, because the patient is a female.

(Slide) This patient was forty-two years of age. Her only symptom was progressive dyspnea, beginning Thanksgiving, 1938. At the time this film was made in December, 1938, this lesion was noted because the patient had been caring for a cold, with no medical advisers. I saw her first on the 25th of February this year, at which time there was extreme orthopnea.

Right thoracic puncture afforded corresponding relief. The fluid was submitted to a pathologist with negative results. However, two days later more fluid was submitted with a report of malignant cells. I would like to recall to your mind the possibility of this laboratory aid, which might serve to clinch your diagnosis.

This patient died ten days after I first saw her. Her right lung was about eighty per cent solidly infiltrated with carcinoma.

(Slide) The picture you see here represents pulmonary malignancy and free fluid.

I should like to again thank Dr. Bauer for his paper.

DR. LAWRENCE D. PHILLIPS (Marshallton): I haven't anything further to add particularly to this paper, except that I would like to present two films, which we think are similar to those that Dr. Bauer has presented.

The first is a negro female, age 47. Her previous history showed that she had had a goiter operation in 1928. At this time she had had a cough for eight months, which was gradually getting worse, but was unproductive until the last two weeks. She complained of a dull pain under the right shoulder blade and weakness of the right arm for six months previous.

(Slide). On physical examination, there was a dullness over this area, the anterior and posterior, and a few rales. As you see here, she developed fluid of the right chest, which was aspirated, and cherry colored, bloody fluid. This patient died in May, 1937. We have no history that any autopsy was done on this case.

(Slide). This is the case of a negro janitor, aged 49. He complained of shortness of breath, pain across the sacral region, cough, and occasional bloody expectoration. He had

been sick for one year and his cough had become gradually worse. His sputum was clear until two months before examination, at which time it became bloody in character. This patient gave a history of night sweats. He had also received treatment for syphilis.

We did not get as extensive physical findings in this case as in the previous one. A posterior view of this chest is more of a central lesion and he died of a pulmonary hemorrhage in September of this year.

The autopsy showed squamous carcinoma of the right middle lobe bronchus, and an atelectasis of the middle lobe.

DR. J. J. HYNES (Wilmington): The title of Dr. Bauer's paper is a good one. The difficulty is early diagnosis of carcinoma of the lung, because it is very often extremely difficult to reach a diagnosis at a time when the patient can be benefited by treatment.

One of the early symptoms, namely thoracic pain, usually means either pleural involvement, or involvement of infiltration of nerves, and subsequently is a symptom of rather extensive carcinoma of the lung, for which very little can be done.

The early symptoms that may be of value in reaching a diagnosis at a time when the patient can be benefited are persistent cough, hemoptysis, and sometimes unexplained low grade fever with signs of an inflammatory process going on in the lungs.

The last film which Dr. Phillips showed was a picture of inflammatory disease. It wasn't particularly characteristic of pulmonary neoplasm, and yet there was a neoplasm there obstructing the right middle lobe bronchus with associated infection with the lobe behind the obstruction.

So very often in these cases we have the signs and symptoms of an inflammatory process in the lung and we can't find or can't ascribe it to a definite cause. In those cases we always ought to think of a pulmonary neoplasm with obstruction to a bronchus, impaired drainage, and infection behind the obstruction. Some of those cases then can be benefited by treatment if the disease has not extended too far.

I have in mind one particular case, a patient of Dr. Beatty's, who complained of pa-

roxysmal cough which he ascribed to the fumes of the plant in which he was working. There were acid fumes present, which he felt were responsible. However, the paroxysms were quite severe and he had to stop work for a time. He consulted Dr. Beatty, and on fluoroscopy of his chest a shadow was noted in the region of the right base. On x-ray examination that proved to be an atelectatic right middle lobe. The lateral view, particularly, showed that well. The atelectasis was proven by a bronchoscopic examination to be due to an obstructing neoplasm in the right middle lower base.

A biopsy was obtained and diagnosis confirmed. He was sent to Dr. Rienhoff, at Johns Hopkins. A complete right lobectomy was performed. The man is alive and well. It has been approximately two years. He is back working at his trade and is in good condition.

It is only seldom that we are able to make a diagnosis of carcinoma of the lung so early in the game. As Dr. Messick so well pointed out, the first requisite for making the diagnosis is to suspect the possible presence of the disease. If one suspects it and attempts to rule it out, it is possible to make a diagnosis fairly early in a limited number of cases.

DR. BAUER: I think Dr. Messick wished to have me elaborate a little more on the examination of the sputum for tumor cells. I said that I had examined the sputum in a number of instances, and it is a very difficult task. So far, as I mentioned before, we were unsuccessful in detecting tumor cells.

Dudgeon and his co-workers stated that they made a positive diagnosis in about half of the cases of cancer of the lung in which they examined the sputum. It seems to me that the first prerequisite for tumor cells to appear in the sputum is an ulcerating lesion into the bronchus, or into the alveoli of the lung. As long as the tumor is fairly well circumscribed and is not breaking down to such an extent as to permit cells, and particularly healthy cells, of the tumor to get in the bronchi, it seems to me it is impossible to make a diagnosis by this means.

I think the method should be studied for quite some time and in a number of

hands, before final judgment is rendered regarding the value of this type of examination. We are continuing that in all suspected instances in the Pennsylvania Hospital at the present time.

ALLERGY AND ITS RELATIONSHIP TO DERMATOLOGY*

JEROME MILLER, M. D.**

Philadelphia, Pa.

No subject can create more confusion than dermatology, and no disease can be more complex than eczema. Referred to as "the dermatological scrapheap," it is only through the excellent work of Sulzberger, Hill and others that light has been thrown upon many individual diseases, and entities such as atopic dermatitis and contact dermatitis have come into being.

The importance of allergy in the etiology of certain cutaneous manifestations is therefore becoming increasingly evident. The extensive investigations of Cooke and Vander Veer, have helped to establish the hereditary factor of atopic dermatitis and the existence in these patients of a constitutional familial predisposition. Schloss (1915), Strickler (1916), and Blackfan (1916) stimulated further interest by obtaining positive skin reactions to certain foods, and demonstrating the subsidence of the eruption following elimination of those test positive foods from the diet. Since then, skin testing, both by the scratch and intracutaneous methods have become an integral part of the study of those subjects suffering from the cutaneous manifestations of allergy.

In my previous address to your group***, I endeavored to stress the principles that were involved in the diagnosis and treatment of allergy, and concluded my remarks with a brief discussion of hay fever.

This evening I have for my purpose a discussion of the clinical cutaneous manifestations of allergy as met with by the general practitioner.

I will briefly enumerate the various cutaneous disorders and discuss in some detail the subject of atopic dermatitis. The clinical ap-

pearance of the disease will be presented and its course followed through childhood into adult life. It will then be differentiated from adult contact dermatitis and finally, the management of such cases including the prophylactic care will be outlined. A brief discussion of urticaria will also be included.

Beginning with the most common of all complaints, there is pruritus, an itching of the skin, which may be present *per se*, or be found associated with some other cutaneous disorder. Included in this category, are such cutaneous manifestations as urticaria, angioneurotic edema, atopic dermatitis, contact dermatitis, erythema multiforme, purpura, and the tri-chophytids.

Of all the foregoing dermatological affections, the eczematous eruptions have offered the greatest difficulties, both from the diagnostic and therapeutic viewpoints.

Out of that class eczema—an enigma to many, there has emerged a well-characterized disease entity—atopic dermatitis. While the separation of atopic dermatitis from the general class eczema has long been recognized by the dermatologist and allergist, it has only been recently accepted by the pediatrician as well. They have all helped to definitely establish its atopic entity and to separate it from eczema of the non-atopic type.

At present four principal types of eczematous eruptions are recognized:

1. Atopic dermatitis.
2. Contact dermatitis.
3. Seborrheic dermatitis.
4. Fungous dermatitis.

I will concern myself chiefly with atopic dermatitis. The individual who is born without clinical manifestations of atopy but by means of a constitutional predisposition, inherits the capacity to become sensitized when sufficient contact with the offending substance has occurred. The shock tissue is the endothelial lining of the superficial blood vessels of the upper cutis or corium. To demonstrate this type of sensitivity the allergen must be brought into contact with the vessel wall by going through the epidermis. This is accomplished either by the scratch or intradermal method; the allergen—a water-soluble substance—reaching the shock tissue by the hematogenous route.

*Read before the Kent County Medical Society, Milford, October 4, 1939.

**Allergist, Skin and Cancer Hospital.

***Del. State Med. Jour., 11: 144, June, 1939.

Atopic dermatitis as seen in the infant usually occurs between the third and fourth months of life. Its evolution may be traced from infancy through childhood into adult life. Hill and Sulzberger have divided it into three types: (1) atopic dermatitis of infancy, (2) atopic dermatitis of childhood and (3) atopic dermatitis of adult life.

In atopic dermatitis of infancy the eruption usually begins as an erythema of the flush areas of the cheeks and forehead, and may then spread to the neck, behind the ears, forearms and lower extremities, or in some cases there may be a generalized dermatitis covering practically the entire body. While the morphology of the eruption may vary, there will be found intense erythema, macules and papules. The most constant and characteristic lesion, however, will be the vesicle. While the eruption may be vesicular in character, there is little or no oozing; in fact, weeping is uncommon, unless mediated by trauma. In isolated cases the eruption may appear at birth or soon after birth. In most cases there is a spontaneous retrogression of the eruption at or about the second year of life.

At this point the eruption may disappear and may never recur again, and the infant may lose its sensitivity. Again, it may be associated or followed by asthma or nasal symptoms. In others, however, it does not disappear entirely, but passes into the stage of childhood, which begins about two years of age and terminates about puberty. Some of these children also improve—in others, the eruption continues into adult life, at which time it becomes known as disseminated neurodermatitis. In the latter two stages the eruption may exist alone, or else it may be associated with some other atopic manifestations such as hay fever, asthma or urticaria.

The eruption in the latter two stages differs from that of the infant in that there is a tendency to papulation and lichenification, rather than vesiculation. This is the result of chronicity and repeated trauma, through rubbing and scratching. In adult and childhood life the lesions become localized to the flexor surfaces of the body, and although the eruption may become generalized, it will be found to predilect the antecubital and popliteal spaces,

the creases of the wrists and neck. Secondary pyogenic infection is less apt to be present in the adult type.

All three stages of atopic dermatitis have certain features in common. Itching in its most profound form is common to all types. As a rule a positive atopic personal and family history is present. There may be the simultaneous coexistence of other allergic conditions, such as asthma, hay fever, and urticaria. A blood eosinophilia is usually present. Positive skin reactions to the foods, inhalants and environmental allergens occur in all three forms, and may be verified by the passive transfer technic of Prausnitz and Kustner. The allergens to which the patient may be hypersensitive to, however, will vary with the different age groups. Until recently it was believed that the food groups in infancy played a dominant role, while the inhalants were but of minor consideration. I believe this viewpoint has been altered and cognizance has been taken of the environmental factor in infancy in addition to the various dietary allergens. Of the foods, egg, milk, and wheat are perhaps the most important offenders. While the order of frequency will vary with the different observers, the fact remains that these foods are the outstanding substances to which the infant is found sensitive. The environmental allergens to which the infant is most frequently sensitive to are feathers, dust, silk and perhaps wool.

To recapitulate, I may say that in atopic dermatitis we have an infant with an antecedent family history of allergy; who manifests positive skin reactions to various foods, inhalant and environmental allergens, and who gives on indirect testing a positive Prausnitz-Kustner reaction. The allergen in question is a water-soluble excitant which reaches the shock tissue by the hematogenous route, and the changes that take place are in the endothelial lining of the superficial vessels of the corium and the lower portion of the epidermis. Pathologically, what occurs in an extravasation of fluid and cells—usually eosinophiles—through the walls of these damaged vessels giving rise to a histological wheal. The changes that take place in the epidermis are secondary in character. The blood picture may show an eosinophilia. In childhood and

adult life as a result of chronicity and trauma from continued scratching and rubbing, the characteristic thickening and lichenification are observed. The eruption in the latter two stages usually manifests a predilection for the flexor surfaces of the body, such as the ante-cubital and popliteal spaces.

Regarding the skin reactions which play so important a role in the specific diagnosis of these cutaneous atopic eruptions, one fact in particular is worthy of note. As clearly pointed out by Tuft, "a positive skin reaction to an allergen means simply that the skin is specifically sensitive to that particular allergen. It does not necessarily imply that this patient is likewise clinically sensitive to this allergen or that it is of importance as an etiologic factor." I believe that I have elaborated on this phase of the subject in greater detail in my former talk to your group.

Next to atopic dermatitis, the most common eczematous eruption is that of contact dermatitis. It is an acute inflammatory condition of the skin, involving the exposed surfaces of the body, and characterized clinically by vesiculation. It is an acquired type of sensitization, primarily involving the epidermis, and caused by direct contact with external irritants. Sensitivity is demonstrated by allowing the excitant to come into direct contact with the skin. This is accomplished by means of the patch test.

Included under the heading of contact dermatitis is the classical illustration of dermatitis venenata. It is an acquired sensitization, due to the direct contact with the oily fraction of the plant. Among other agent that are capable of producing this form of dermatitis, mention may be made of the occupational or industrial excitants, the plant excitants, and the various biological agents. Examples of these may be found in the dentist sensitive to novocain, the nurse to formalin, the printer to ink, and the cook to strong soaps. Poison ivy and ragweed dermatitis are examples of plant excitants, and the trichophytids of biological sensitivity.

Contact dermatitis may be differentiated from atopic dermatitis by the negative personal and family history of atopy. The eruption is localized to the exposed surfaces of the body, and characterized clinically by vesicula-

tion. Skin testing is negative, and reagins are not demonstrable in the blood. There is no blood eosinophilia. The shock tissue is the epidermis, and the excitant an external irritant. Whereas skin tests are negative, the patch test is positive.

The subject matter would not be complete without a discussion of urticaria. It is an inflammatory, edematous condition of the skin, characterized clinically by the appearance of wheals, and accompanied by itching or burning.

The lesions are evanescent in character, and the eruption may be localized or distributed over the entire body. In contrast to contact dermatitis which favors the exposed surfaces of the body, the eruption in urticaria usually favors the covered areas, as the trunk and extremities. The itching as in atopic and contact dermatitis is most intense. Although the eruption is most commonly found on the skin, it may also involve the mucous membrane of the upper and lower respiratory tract, and the gastro-intestinal tract.

The mechanism of the production of the wheal, which is so characteristic of urticaria, is unknown. Numerous theories have been propounded to explain its formation. The most acceptable explanation at the present time is that of Lewis, who demonstrated experimentally that the wheal results from the liberation of a substance into the tissues which is similar to histamine, and therefore termed the H-substance.

Is urticaria an expression of atopy, or is it a medical condition? This controversial point is still being argued by the allergist and internist. It appears to me that both branches of medicine may be incriminated. Observers have shown that the predisposing factor of heredity is present in 25-70% of the cases. While heredity may be a factor in urticaria, it certainly is not as prevalent as it is in hay fever and asthma. Recent statistics show that allergy is responsible for about 20-25% of all the cases of urticaria. Foremost in the production of urticaria are the various foci of infection which are responsible for 30% of the cases. Other etiological factors that may be cited are those of psychogenic origin, endocrine disturbances, and physical factors such as heat, cold, and light.

Of those cases that are due to allergy, foods are probably the most frequent offender. Next to the foods, drugs occupy a very prominent position. Of the drugs mention may be made of phenolphthalein, aspirin, quinine, bismuth and insulin. The inhalant allergens may produce urticaria but rather infrequently. Physical allergy does exist and is a causative factor in the production of urticaria, and results from direct contact.

In the management of these cases the discussion will be limited to the prophylactic care from the environmental and dietary standpoints.

Environmental management is provided by making the bedroom dust free. This is accomplished by removing all pictures, carpets, draperies and stuffed furniture from the room. The room should be occupied by the patient alone and contain an iron or wooden bed with either a horse hair mattress or cotton mattress that has been encased in a rubberized material. Pillows are best eliminated entirely. Blankets should also be encased in linen sheets and old blankets that have received frequent washings are preferable. Clothes closets if present in the room should be free from all articles of clothing. A washable rug may be used on the floor or what is more preferable, a linoleum rug. Before the child enters the room upon retiring, the floors and baseboards should be cleaned with a damp or oiled mop. If the house is heated by hot air, the opening in the room should be tightly sealed. The temperature of the room should remain at all times between 68-70° F.

The clothing worn next to the skin should be non-irritating, and material such as linen or cotton be worn in preference to wool or silk. Avoid all dyed articles of clothing. Toys are to be of steel, celluloid, rubber, or washable cotton material. Stuffed toys and dolls should not be brought into the home. All household pets are to be removed from the house and immediate environment. Tales and body powders are not to be used on the child and hair preparations and irritating soaps are not to be used on the body or scalp. I recall one boy who is so sensitive to a proprietary hair tonic, that the smallest amount is sufficient to produce an inflammation of the scalp and forehead with intense itching. The eruption is sim-

ply controlled by removing the offending tonic. I am reminded of another patient who is sensitive to the oil of cassia, an ingredient of chewing gum. Not only contact with this substance, but sensitivity to the vapors itself is sufficient to produce a marked cheilitis. By avoiding this substance, improvement was complete. This latter interesting and most unusual case is being presented in the near future.

A few words regarding soaps. All soaps are to be looked upon with suspicion and in an infant with a susceptible skin it appears justifiable to eliminate all soaps. Cleanliness may be resorted to by making use of either a starch, bran or oatmeal sponge or bath.

Respiratory infections, if repeated and frequent, and occurring seasonally as summer "head colds," should warrant careful attention on the part of the mother. If allowed to continue, such "head colds" instead of subsiding, might represent the beginning of a seasonal or perennial hay fever, and as such, may be the causative factor in the production of an asthmatic syndrome. However, if the condition is recognized early enough, and the offending substance or substances either eliminated or avoided, and hyposensitization resorted to if deemed necessary, such complications may be prevented.

Not only should prophylactic measures be taken against the inhalant and environmental allergens, but precautions taken against certain foods as well.

From the onset the allergic individual should be guarded against ingestion of known potent allergens such as egg, milk and wheat, if these substances are even thought to be suspicious in the production of the patient's eruption. Foods containing a multiple number of ingredients should never be offered to the child at the onset. Neither should foods be given in which the ingredients are unknown or not listed. It is best to begin the child with one new food at a time and introduce new foods at weekly or biweekly intervals, providing once again, that the food introduced is not producing or aggravating an already existing condition. In this way any untoward reactions that may occur can be observed and the incriminating food eliminated. If complex foods are given it at once

becomes apparent that the specific offending substance in the food cannot be accounted for. Detective work at its best is oftentimes required.

As the first food that is introduced is usually milk, it would seem justifiable to begin the atopic infant on evaporated milk, and in severe cases on evaporated milk that has been boiled for at least twenty (20) minutes. In a known case of dermatitis due to milk, it is of course reasonable to place the patient on a milk-free diet.

According to Hill, cow's milk contains four milk proteins: casein, lactalbumin, lactoglobulin, and opalisin. The latter two are present only in very small amounts and apparently are not antigenically active. Casein and lactalbumin, however, are potent allergens. While lactalbumin is coaguable by heat, casein is not, and as such retains its antigenicity in spite of prolonged boiling. Casein in addition is a common antigen in milk of different animals, while the other milk proteins are species specific. It therefore becomes obvious that in an individual who is sensitive to the casein fraction of the milk, heating or the substitution of goat's milk will not suffice. If on the other hand, the individual is sensitive to lactalbumin, the heating of cow's whole milk or evaporated milk or the substitution of goat's milk may be of distinct value.

Of the cereal group the most frequent offender appears to be wheat. As has already been stated it is best to add the cereals individually rather than in combination, and not to use those cereals in which the ingredients are not listed. In a wheat sensitive child, it does not necessarily imply that the patient is likewise sensitive to all cereals. Such a child may be able to tolerate other cereals, as corn, oats, rice, or tapioca. The addition or replacement of a cereal may be made as the child either improves or continues to manifest symptoms. It must be remembered that skin eruptions are rather slow to heal and deductions must not be made too fast in incriminating a certain cereal or food.

Whether egg is the trouble-maker as often as observers are prone to write about, is a matter of opinion. It would appear to me that egg is a really potent allergen. The majority of children suffering with an eruption have

eggs taken away from them even before they are seen by the attending physician. Many of these so-called egg-sensitive cases are capable of digesting egg without apparent harm. Several observers suggest that egg should not be introduced into the diet of an atopic individual much before the end of the first year. This, I believe, is entirely unnecessary unless the individual is proven to be egg-sensitive. It would be advisable to begin feedings with the yolk of the egg in small quantities, and if no harm results, then the white of the egg may be introduced slowly and cautiously, and symptoms carefully watched for. Here as with milk and wheat an egg-free diet is the one of choice, if we are dealing with a true case of egg sensitivity.

It should be remembered that when we are dealing with children having severe skin eruptions, we must decide between two courses. Shall the general health of the child suffer in an attempt to clear the eruption by excluding important body building foods, or shall the child maintain the eruption and its good health and nutrition, and the skin-erupting foods remain? I believe there is only one conclusion that can be drawn, and that is that the nutrition of the child must be maintained. In spite of the severity of the eruption, the intense itching, and the superficial pyogenic infection, the general health is not apparently affected. In fact, it has been observed that the general intelligence of these individuals is somewhat higher than in the average age group.

If after all procedures fail to reveal the offending substances that are producing the eruption and prophylactic management is of little help, elimination diets may be resorted to, and if improvement occurs other foods may be added slowly and cautiously, in small amounts, and at lengthened intervals. Where vitamin products are essential they may be used and added to the diet, providing the child is not hypersensitive to those addition products.

A few observers have advocated the oral method of desensitization in patients sensitive to milk, wheat, eggs and other food allergens. This procedure while it may be worth while in a small group of cases is so tedious and time consuming and the results so disappointing

after several months to a year of treatment that I believe the results do not warrant its use in most cases.

In the discussion of the treatment nothing has been said regarding specific therapy. To do so and in length may serve as another topic of discussion. I can only reiterate that the cardinal principles in the treatment resolve about (1) the complete elimination or avoidance of the offending substances from the diet and environment of the patient and (2) desensitization.

In atopic dermatitis specific treatment depends upon finding the cause if possible by means of history and skin tests, and eliminating or avoiding the allergen. Oral desensitization may be attempted, but as already mentioned, such procedure is not feasible at all times. Elimination diets may next be resorted to and have been found to be extremely useful in the treatment of atopic dermatitis. They are used in those cases in which the specific allergen cannot be ascertained. If after all the above procedures fail, the problem then resolves itself about the alleviation of the distressing symptoms. This is accomplished by local topical applications and sedation if found necessary.

Contact dermatitis is treated similarly to atopic dermatitis. Diagnosis is made by the patch test and the offending substance is either eliminated or avoided. If this is not possible desensitization may be attempted, or change of occupation or residence resorted to. In the case of ragweed dermatitis and poison ivy, specific desensitization is employed with good results.

In the treatment of urticaria, those cases that are proven to be of allergic origin are improved by eliminating or avoiding the offending food or inhalant. Best results, however, seem to be obtained in those cases in which foci or infection are removed. The psychogenic urticaria is best treated by psychotherapy. Endocrine therapy is administered to proven bases of endocrine disturbance.

The prognosis in these cases is quite favorable. In atopic dermatitis statistics show that there is a complete subsidence of the eruption at or about the second year of life. As Sulzberger has pointed out the eruption is not

contagious and will disappear without leaving any permanent scars. Aside from the cutaneous manifestations the general health and nutrition of the child is not impaired, and there need be no fear of a blood infection. It must be remembered, however, that these children have the inherent ability to develop new sensitivities which may involve other organs, and the phrase once allergic, always allergic, must be borne in mind. These children are potential material for the later manifestations of atopy.

In contact dermatitis, the eruption disappears after removal of the offending substance, if found. In the sensitive dentist this is accomplished by careful handling of novocain, and in the nurse by avoiding the use of formalin. In dermatitis venenata the eruption is self-limited, and may be avoided by specific desensitization.

In urticaria, the prognosis is also favorable. The acute attacks are self-limited and the chronic cases depend upon finding the etiologic offender.

SUMMARY

The clinical appearance of atopic dermatitis was presented, and its course followed through childhood into adult life. The similarities and differences between infant and adult atopic dermatitis were briefly sketched. Atopic dermatitis was then differentiated from contact dermatitis, as the subject matter would otherwise be incomplete. Urticaria was then briefly discussed. The prophylactic management of these patients was then outlined from the environmental as well as dietary viewpoint. The prognosis of these cases concluded the discussion.

57th and Sansom Streets.

TRUTH ABOUT MEDICINE

PEPPLES PEP-YOU-UP—The Bureau of Investigation of the American Medical Association reports that William Everette carried on a piece of mail-order quackery from Philadelphia, using such trade names as "Pepples Co.," "Pepples Pep-You-Up Co." and "W. E. M. E. Medicine Co.," "Pepples Pep-You-Up" are advertised for "Sexual Vigor," with the claim "The result is pep, power, en-

ergy and endurance." It is stated to contain "no drugs or dope." The "W. E. M. E. Herb Tonic" is recommended for "lost PEP, weakness, piles, kidney, indigestion, nervousness, rheumatic pains, getting up nights." The "treatment"—whether for piles or for lack of "pep"—consisted of a liquid and some tablets. The liquid, according to government chemists, was a solution of epsom salt in water flavored with peppermint, together with some laxative drugs. The tablets were analyzed and found to consist essentially of plant tissue including a bitter and a laxative. The government charged that the claims made by Everrette that his "patent medicines" would enable sufferers from "kidney trouble," indigestion, piles, sexual weakness, and so on to "say goodbye to these conditions" were false and fraudulent. On July 14, 1938, the Post Office Department declared the "treatment" of William Everrette a fraud and debarred it from the mails. Since March 1937 the Federal Trade Commission has been considering a complaint against Everrette, trading as W. E. & M. E. Medicine Co. This case was not settled until Sept. 1939, when the Commission definitely ordered Everrette to cease representing that his "Herb Tonic" purifies the blood, relieves all acute pain, stimulates the sexual organs or system, or does some of the other things claimed for it. (*J. A. M. A.*, Nov. 11, 1939, p. 1828)

TESTIMONIALS OF THE DEPARTED FOR VALENTINE'S MEAT JUICE—An early report of the Council on Pharmacy and Chemistry (1909) pointed out that Valentine's Meat Juice was being promoted with fallacious claims that it is highly nutritious and is valuable in the treatment of pneumonia, diphtheria and typhoid. Such claims are no longer made. Recently physicians have received a letter referring to an accompanying booklet containing the "experience of physicians who have, themselves, suffered from gastric and intestinal troubles and found Valentine's Meat Juice of much comfort and satisfaction." Of the testimonials (twenty-one in number) eleven were from abroad. Only one doctor

of the entire group of American physicians whose testimonials are offered by the Valentine's Meat Juice Company in the year 1939 is alive. The title of the booklet is "Report From Members of the Medical Profession Who Have Themselves Taken Valentine's Meat-Juice When Ill With Gastric or Intestinal Trouble." (*J. A. M. A.*, Nov. 18, 1939, p. 1884)

VITAMIN K: II—The Council on Pharmacy and Chemistry reports that since the publication of a preliminary report on vitamin K by Albert M. Snell in *THE JOURNAL* for April 15, 1939, there has been witnessed intense interest in attempts to isolate compounds having vitamin K activity. Very definite progress has been made in establishing the chemical nature of naturally occurring compounds, and many synthetic preparations having vitamin K activity have been prepared. Since further evidence of the therapeutic value of vitamin K preparations is also accumulating it seemed desirable to have a further review of this subject. A supplementary report was therefore prepared by Drs. Albert M. Snell and Hugh R. Butt at the request of the Council, and the Council authorized its publication. Drs. Snell and Butt concluded that various phases of the chemical, physiologic, biologic aspects and the clinical usefulness of vitamin K are developing so rapidly that a number of the views expressed in their present report may require modification within a comparatively short time; that it would therefore seem wise at the present moment to withhold any dogmatic statements until the recently developed chemical products exhibiting vitamin K activity have been studied more extensively from biologic and clinical standpoints. During the past few months the Council has conducted extensive correspondence relating to the adoption of a suitable non-proprietary name for vitamin K, but it is not prepared to make a definite recommendation until certain matters relating to priority have been settled. (*J. A. M. A.*, Dec. 2, 1939, p. 2056)

EDITORIAL

DELAWARE STATE MEDICAL JOURNAL

Owned and published by the Medical Society of Delaware. Issued about the twentieth of each month under the supervision of the Publication Committee.

W. EDWIN BIRD, M. D. Editor
Du Pont Building, Wilmington, Del.

C. LEITH MCNSON, M. D. Associate Editor
1015 Wash. St., Wilmington, Del.

M. A. TARUMIANZ, M. D. Associate Editor & Bus. Mgr.
Du Pont Building, Wilmington, Del.
Telephone, Wilmington 3-4366

Articles sent this Journal for publication and all those read at the annual meetings of the State Society are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Manuscript should be sent in typewritten, double spaced, wide margin, one side only. Manuscript will not be returned unless return postage is forwarded.

The right is reserved to reject material submitted for either editorial or advertising columns. The Publication Committee does not hold itself responsible for views expressed either in editorials or other articles when signed by the author.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscripts, or made in sufficient time before publication.

All correspondence regarding editorial matters, articles, book reviews, etc., should be addressed to the Editor. All correspondence regarding advertisements, rates, etc., should be addressed to the Business Manager.

Local news of possible interest to the medical profession, notes on removals, changes in address, births, deaths and weddings will be gratefully received.

All advertisements are received subject to the approval of the Council on Pharmacy and Chemistry of the American Medical Association.

It is suggested that wherever possible members of the State Society should patronize our advertisers in preference to others as a matter of fair reciprocity.

Subscription price: \$2.00 per annum in advance. Single copies, 20 cents. Foreign countries: \$2.50 per annum.

VOL. XII FEBRUARY, 1940 No. 2

How'dy, Tarheel!

We have before us Volume 1, Number 1, of the *North Carolina Medical Journal*, dated January 1, 1940, and we welcome it into the ranks of the State Medical Journals. An excellent issue is this first one, containing sixty-four pages of text, sixteen pages of advertising, and four pages of announcements. The text contains ten fine original articles, two editorials, greetings from the A. M. A. officials, case reports, news reports, woman's auxiliary, obituaries, and book reviews. The format conforms to the standards used by most of the state journals. A loose-leaf photo of the President of the State Medical Society is included. Here it is pertinent to remark

that the Presidential Address of Dr. J. Buren Sidbury, of Wilmington, on "The Doctor and Socialized Medicine," is an excellent and sane discussion and well deserves its position of leading article.

It augurs well for the future of this newborn that its editor is a seasoned pediatrician, Dr. Wingate M. Johnson, Jefferson, '08. His inaugural editorial shows that he knows what the purposes and functions of a state medical journal are, and the whole issue proves he knows what one should look like. The advertisements contain only Council-passed medicinals. The magazine is copyrighted.

This newcomer makes the thirty-sixth state journal, representing officially the District of Columbia and forty-six state societies. (Two journals represent two states each, and four journals represent three states each.) The only state societies not now publishing an official journal are Maryland, Mississippi and Montana. The day will come, and we hope soon, when these three states—whose very initial stands for Medicine—will join the procession and make it unanimous.

Financially, the new journal should prove a success. Advertising fills 20 per cent of the first issue, and this will increase in one season, chiefly from national advertisers. Also, the state can well afford a generous increase in local advertising, as Federal figures, just released show that North Carolina stands second in the payment of taxes, with a per capita of \$88.00, which is exceeded only by Delaware, with a per capita of \$238.00. We have no doubts about the new baby being adequately fed and clothed. The price is \$3.00 per year; 30 cents per copy. The editorial office is at 428 Stratford Road, Winston-Salem; the business office is at Roanoke Rapids, in charge of Dr. T. W. M. Long.

Again we say:

*How'dy, Tarheel! pleased t' meetcha;
Welcome, scrivener! glad t' greetcha.*

DELAWARE ACADEMY OF MEDICINE

At the annual meeting held at the Academy on January 23, 1940, Dr. C. M. A. Stine was re-elected as a member of the Board of Directors and Mr. J. K. Garrigues was elected as a new member, each for a term of four years.

New members of committees were elected as follows: F. A. Hemsath, M. D., Library Committee; E. G. Laird, M. D., Scientific Committee; O. N. Stern, M. D., Admission Committee, each for a term of five years; and C. H. Davis, M. D., and W. R. Staats, D.D.S., Executive Committee, each for a term of one year.

Others who will also assume office on April 1 are: W. Edwin Bird, M. D., Chairman of the Library Committee; C. L. Munson, M. D., Chairman of the Scientific Committee, and D. T. Davidson, M. D., Chairman of the Admission Committee.

Officers of the Academy are L. B. Flinn, M. D., President; W. H. Kraemer, M. D., Treasurer, and Willard F. Preston, M. D., who was elected Secretary to succeed the late John H. Mullin, M. D.

Resolutions were adopted upon the deaths of two members: John H. Mullin, M. D., secretary since the founding of the Academy in 1930, and Franklin Bernard, D.D.S., of Kennett Square; and also of Mr. Walter E. Jackson, who had been custodian of the building since 1933.

The following excerpts are taken from the President's report: "The Delaware Academy of Medicine has arrived at its tenth birthday. Reviewing these ten years we all can be justly proud of what has been accomplished. We have established a medical center for the state of Delaware; we have here, in this building, a meeting place for the majority of the organized medical and dental societies of the state. The public has come to regard this building and this institution as the main source of medical information in the community. On numerous occasions this building has served as a neutral ground for the meeting of several medical groups. It is the home of the Delaware Committee of the American Society for the Control of Cancer. We have here a library which would rank high in any locality. Each year it is used more and more..."

"However, this is no time to rest on our

laurels. This is, and must be, a growing institution. It is important that every member acquaint the younger medical and dental men and women with the advantages and facilities of the Academy. It is essential for proper growth, for proper service to the profession and to the community that the younger members of the profession become members of this institution..."

Fourteen physicians and three dentists were elected to membership in the Academy. Tentative plans were announced for a meeting and banquet to be held sometime in the near future to commemorate the tenth anniversary of the founding of the Academy.

WOMAN'S AUXILIARY

Mrs. H. G. Buckmaster, President of the Delaware Auxiliary, entertained her official family at luncheon February 7th at the Hotel Darling. As it was a family party all speeches, business, and conversation were "off the record" and no notes taken. "Mother Buckmaster" was distressed that illness kept about one-third of her children at home, where it was hoped the doctor would soon cure his Auxiliary.

The Auxiliary family consists of the following:

President, Mrs. H. G. Buckmaster; First Vice President, Mrs. W. E. Bird; Second Vice President, Mrs. C. J. Pritekett; Third Vice President, Mrs. W. P. Orr; Corresponding Secretary, Mrs. F. A. Hemsath; Recording Secretary, Mrs. N. W. Voss; Treasurer, Mrs. W. O. LaMotte; chairman of committees: Archives, Mrs. J. R. Durham; Exhibits, Mrs. J. H. Mullin; Flowers, Mrs. C. E. Wagner; Finance, Mrs. P. R. Smith; Hospitality, Mrs. Roger Murray; Hygeia, New Castle County, Mrs. J. M. Messick; Kent County, Mrs. L. L. Fitchett; Sussex County, Mrs. M. Van Valkenburg; Legislation, Mrs. R. W. Tomlinson; co-chairman, Mrs. E. R. Mayerberg; Membership, Mrs. S. W. Pennie; Printing, Mrs. J. W. Butler; Program, Mrs. L. L. Jones; Public Relations, Mrs. Alexander Smith; Revisions, Mrs. Ira Burns; Sewing, Mrs. D. deW. Burch; Publicity, Mrs. A. M. Gehret.

The next regular meeting of the Auxiliary—a luncheon—will be held February 20th at the Coffee Shop, Ninth and Orange streets, Wilmington.

MISCELLANEOUS

The Foundation Prize of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons

(1) "The award which shall be known as 'The Foundation Prize' shall consist of \$150."

(2) "Eligible contestants shall include only (a) interns, residents, or graduate students in Obstetrics, Gynecology or Abdominal Surgery, and (b) physicians (with an M. D. degree) who are actively practicing or teaching Obstetrics, Gynecology or Abdominal Surgery."

(3) "Manuscripts must be presented under a nom-de-plume, which shall in no way indicate the author's identity, to the Secretary of the Association together with a sealed envelope bearing the nom-de-plume and containing a card showing the name and address of the contestant."

(4) "Manuscripts must be limited to 5,000 words, and must be typewritten in double-spacing on one side of the sheet. Ample margins should be provided. Illustrations should be limited to such as are required for a clear exposition of the thesis." Submit 3 copies of thesis and illustrations to Secretary.

(5) "The successful thesis shall become the property of the Association, but this provision shall in no way interfere with publication of the communication in the journal of the author's choice. Unsuccessful contributions will be returned promptly to their authors."

(6) "All manuscripts entered in a given year must be in the hands of the Secretary before June 1st."

(7) "The award will be made at the annual meetings of the Association, at which time the successful contestant must appear in person to present his contribution as a part of the regular scientific program, in conformity with the rules of the Association. The successful contestant must meet all expenses incident to this presentation."

(8) "The President of the Association shall

annually appoint a Committee on Award, which, under its own regulations shall determine the successful contestant and shall inform the Secretary of his name and address at least two weeks before the annual meeting."

Jas. R. Bloss, M. D., Secretary, 418 Eleventh Street, Huntington, W. Va.

THE VAN METER PRIZE AWARD

The American Association for the Study of Goiter again offers the Van Meter Prize Award of Three Hundred Dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The Award will be made at the annual meeting of the Association which will be held at Rochester, Minnesota, on April 15th, 16th and 17th, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English; and a typewritten double-spaced copy sent to the corresponding secretary, Dr. W. Blair Mosser, 133 Biddle street, Kane, Pennsylvania, not later than March 15th.

The Committee, who will review the manuscripts, is composed of men well qualified to judge the merits of the competing essays. Dr. T. L. Althausen of the University of California, received the Award for the year 1939 in recognition of his essay entitled "A Study of the Influence of the Thyroid Gland on the Digestive Tract."

A place will be reserved on the program of the annual meeting for presentation of the Prize Award Essay by the author if it is possible for him to attend. The essay will be published in the annual proceedings of the Association. This will not prevent its further publication, however, in any journal selected by the author.

1789—MEDICAL SOCIETY OF DELAWARE—1940

OFFICERS AND COMMITTEES FOR 1940

PRESIDENT, Bruce Barnes, Seaford
 FIRST VICE-PRESIDENT, Joseph M. Barsky, Wilmington
 SECOND VICE-PRESIDENT, William Marshall, Milford
 SECRETARY, C. Leith Munson, Wilmington
 TREASURER, A. Leon Heck, Wilmington

COUNCILORS

Richard Beebe (1940) Lewes Roger Murray (1941) Wilmington Joseph S. McDaniel (1942) Dover

AMERICAN MEDICAL ASSOCIATION

DELEGATE: M. I. Samuel, Wilmington (1941) ALTERNATE: L. L. Fitchett, Felton (1941)

STANDING COMMITTEES

COMMITTEE ON SCIENTIFIC WORK

C. L. Munson, Wilmington
 I. J. MacCollum, Wyoming
 F. I. Hudson, Rehoboth Beach

COMMITTEE ON PUBLIC POLICY AND LEGISLATION

E. R. Mayerberg, Wilmington
 Lewis Booker, New Castle
 J. S. McDaniel, Dover
 J. R. Elliott, Laurel
 C. L. Munson, Wilmington

COMMITTEE ON PUBLICATION

W. E. Bird, Wilmington
 M. A. Tarumianz, Farnhurst
 C. L. Munson, Wilmington

COMMITTEE ON MEDICAL EDUCATION

E. H. Lenderman, Wilmington
 John Baker, Milford
 W. T. Chipman, Harrington

COMMITTEE ON HOSPITALS

H. L. Springer, Wilmington
 H. V.P. Wilson, Dover
 R. C. Beebe, Lewes

COMMITTEE ON NECROLOGY

G. W. Vaughn, Wilmington
 C. B. Scull, Dover
 U. W. Hocker, Lewes

COMMITTEE ON CANCER

Ira Burns, Wilmington
 F. A. Emsath, Wilmington
 H. L. Springer, Wilmington
 G. C. MacElfatrick, Wilmington
 W. H. Speer, Wilmington
 H. V.P. Wilson, Dover
 E. C. Beebe, Lewes
 O. A. James, Milford
 W. T. Chipman, Harrington

COMMITTEE ON MEDICAL ECONOMICS

W. E. Bird, Wilmington
 G. W. K. Forrest, Wilmington
 W. O. LaMotte, Wilmington
 J. W. Butler, Wilmington
 D. W. Lewis, Middletown
 C. G. Harmonson, Smyrna
 William Marshall, Milford
 J. E. Marvel, Laurel
 U. W. Hocker, Lewes

COMMITTEE ON MENTAL HEALTH

M. A. Tarumianz, Farnhurst
 K. B. Corrin, Wilmington
 A. C. Smoot, Georgetown

ADVISORY COMMITTEE, WOMEN'S AUXILIARY

G. W. Vaughn, Wilmington
 W. W. Ellis, Delaware City
 C. B. Scull, Dover
 G. Metzler, Bridgeville
 R. T. LaRue, Wilmington

REPRESENTATIVE TO THE DELAWARE ACADEMY OF MEDICINE

W. O. LaMotte, Wilmington

WOMAN'S AUXILIARY

Mrs. H. G. BUCKMASTER, President, Wilmington
 Mrs. W. E. BIRD, Vice-Pres. for New Castle County, Wilmington
 Mrs. C. J. PRICKETT, Vice-Pres. for Kent County, Smyrna
 Mrs. W. P. ORR, Vice-Pres. for Sussex County, Lewes
 Mrs. N. W. VOSS, Recording Secretary, Wilmington
 Mrs. F. A. HEMSATH, Corresponding Secretary, Wilmington
 Mrs. M. O. LAMOTTE, Treasurer, Wilmington

NEW CASTLE COUNTY MEDICAL SOCIETY—1940

Meets Third Tuesday

C. E. WAGNER, President, Wilmington.
 B. M. ALLEN, Vice-President, Wilmington.
 C. L. HUDIBURG, Secretary, Wilmington.
 JOHN J. CASSIDY, Treasurer, Wilmington.
 Delegates: B. M. Allen, L. W. Anderson, W. E. Bird, Lewis Booker, I. L. Chipman, D. T. Davidson, W. Ellis, I. M. Flinn, G. W. K. Forrest, A. L. Heck, C. L. Hudiburg, E. R. Mayerberg, G. C. McElfatrick, G. D. Niles, P. R. Smith, C. E. Wagner.
 Alternates: G. A. Beatty, Ira Burns, J. W. Kerrigan, J. S. Keyser, A. D. King, R. T. LaRue, W. W. Lattomus, Charles Levy, C. L. Munson, L. D. Phillips, W. F. Preston, S. W. Rennie, L. J. Rigney, F. S. Skura, A. J. Strikol, E. M. Vaughan.

Board of Directors: C. E. Wagner, 1940; C. L. Hudiburg, 1940; Lewis Booker, 1940; L. J. Jones, 1941; N. W. Voss, 1942.
 Board of Censors: D. T. Davidson, 1940; O. S. Allen, 1941; J. A. Shapiro, 1942.

Program Committee: B. M. Allen, C. E. Wagner, C. L. Hudiburg.

Legislation Committee: W. H. Speer, G. W. Vaughn, J. M. Barsky.

Membership Committee: A. J. Strikol, L. B. Flinn, Grace Swinburne.

Necrology Committee: E. R. Miller, R. R. Tybout, J. R. Downes.

Nomination Committee: Lewis Booker, L. J. Jones, N. W. Voss.

Audits Committee: J. W. Butler, E. M. Bohan, O. N. Stern.

Public Relations Committee: Ira Burns, W. M. Pierson, J. A. Giles, R. A. Lynch.

Medical Economics Committee: W. E. Bird, L. J. Rigney, F. A. Hemsath, J. C. Pierson, B. S. Vallett.

KENT COUNTY MEDICAL SOCIETY—1940

Meets the First Wednesday

J. B. BAKER, President, Milford.
 I. W. MAYERBERG, Vice-President, Dover.
 B. F. BURTON, Jr., Secretary-Treasurer, Dover.
 Delegates: A. V. Gilliland, J. R. Beck, H. V. P. Wilson.
 Alternates: C. J. Prickett, S. M. D. Marshall, L. L. Fitchett.
 Censors: S. M. D. Marshall, R. W. Comegys, Wm. Marshall Jr.

DELAWARE ACADEMY OF MEDICINE—1940

Open 10 A. M. to 5 P. M. and Meeting Evenings

LEWIS B. FLINN, President.

W. F. PRESTON, First Vice-President.

J. C. PIERSON, Second Vice-President.

W. F. PRESTON, Secretary.

W. H. KRAEMER, Treasurer.

Board of Directors: S. D. Townsend, C. M. A. Stine, W. S. Carpenter, H. F. du Pont, A. L. Bailey, Mrs. Ernest du Pont, W. P. Allen, J. K. Garrigues.

DELAWARE PHARMACEUTICAL SOCIETY—1940

WALTER E. BROWN, President, Wilmington.

HARRY P. JONES, First Vice President, Smyrna.

WM. E. HASTINGS, Second Vice President, Selbyville.

ALBERT BUNIN, Secretary, Wilmington.

ALBERT DOUGHERTY, Treasurer, Wilmington.

Board of Directors: E. J. Elliott, Bridgeville; W. E. Brown, Wilmington; H. P. Jones, Smyrna; P. P. Potocki, Wilmington; G. W. Rhodes, Newark.

Legislative Committee: Thomas Donaldson, Chairman, Wilmington.

SUSSEX COUNTY MEDICAL SOCIETY—1940

Meets the Second Thursday

G. M. VAN VALKENBURGH, President, Georgetown.
 CARLTON FOOKS, Vice President, Frankford.
 F. I. HUDSON, Secretary-Treasurer, Rehoboth Beach.
 Delegates: G. V. Wood, H. E. LeCates, A. C. Smoot, G. M. Van Valkenburgh.
 Alternates: C. M. Moyer, E. L. Stambaugh, J. R. Elliott, F. I. Hudson.
 Censors: H. E. LeCates, Bruce Barnes, A. C. Smoot.

DELAWARE STATE BOARD OF HEALTH—1940

Stanley Worden, M. D., President, Dover; Mrs. Charles Warner, Vice-President, Wilmington; Bruce Barnes, M. D., Secretary, Seaford; W. H. Speer, M. D., Wilmington; Margaret I. Handy, M. D., Wilmington; J. F. Maguire, D. D. S., Wilmington; Mrs. Elizabeth H. Martin, Lewes; Mrs. Caroline Hughes, Middletown; E. F. Smith, M. D., Acting Exec. Secy., Dover.

DELAWARE STATE DENTAL SOCIETY—1940

J. R. EMORY, President, Harrington.
 A. GORBERMAN, First Vice-Pres., Wilmington.

W. H. POWELL, Second Vice-Pres., Wilmington.

J. A. BOUNDS, Secretary, Laurel.

F. M. HOOPES, Treasurer, Wilmington.

E. E. VEASEY, Librarian, Wilmington.
 Delegate to A. D. A.: P. A. Traynor, Wilmington.

HISTORY
of the
MEDICAL SOCIETY
of
DELAWARE
1789 - 1939

The narrative of 150 years of Medicine in Delaware, with portraits of 78 presidents, 206 pages. Bound in Fabricoid.

Price, \$3.00

Medical Society of Delaware
c/o Delaware Academy of Medicine
Wilmington

HAARLEM LODGE
CATONSVILLE, MD.

A private sanitarium with farm and grounds of 28 acres for the care and psychological rehabilitation of patients with nervous or mental disorders — including patients with alcoholic problems.

Staff of 3 psychiatrists
Guests limited to 35

SILVER PICRATE

Wyeth

**Has shown a CONVINCING RECORD* OF
EFFECTIVENESS in ACUTE ANTERIOR URETHRITIS
due to *Neisseria gonorrhoeae* • *Trichomonas vaginalis*
*Monilia albicans***

Silver Picrate is a crystalline compound of silver in definite chemical combination with picric acid. Dosage form for use in anterior urethritis: Wyeth's Silver Picrate Crystals in an aqueous solution of 0.5 percent.

Supplied at all pharmacies in vials of 2 grams

Complete literature on Silver Picrate as used in genitourinary and gynecological practice will be mailed on request.

*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.

BOOK REVIEWS

Handbook of Orthopedic Surgery. By Alfred R. Shands, M. D., Associate Professor of Surgery in Charge of Orthopedic Surgery, Duke University. 2nd Edition. Pp. 567, with 154 illustrations. Cloth. Price, \$4.25. St. Louis: C. V. Mosby Company, 1940.

The enthusiastic reception of the first edition of the Handbook by the Medical Director of the local Nemours Foundation has necessitated another edition within three years, which is fast travelling for an orthopedic text. The volume appears with the collaboration of Dr. Richard B. Raney, Associate in Orthopedic Surgery at Duke. The volume attains both its primary objective, conciseness, and its secondary objective, completeness and modernity, the literature as late as July, 1939, being included. The book follows the pattern of the first edition. The illustrations are excellent, as is also the bibliography and the index.

We agree with the many others who consider this Handbook the best text for students and general practitioners now available in English.

Eye, Ear, Nose and Throat Manual for Nurses. By Roy M. Parkinson, M. D., Head Dentist and Aurist, St. Joseph's Hospital, San Francisco. 4th Edition. Pp. 243, with 79 illustrations. Cloth. Price, \$2.25. St. Louis: C. V. Mosby Company, 1939.

The author has endeavored to present a classroom text for nurses that would be brief and free from debatable questions, one that would give the student nurse a general idea of what may be encountered in eye, ear, nose and throat cases. That his efforts should now be extended to a fourth edition is ample evidence of his success. The work has been brought up to date, though it follows the general arrangement of the previous editions. The illustrations are ample, and the tinted paper stock is restful. We predict the popularity of this book will continue.

Medical Education in the United States: 1934-1939. By the Council of Medical Education and Hospitals of the A. M. A. Pp. 259. Paper. Chicago: American Medical Association, 1940.

This is a voluminous report of a survey conducted by the Council. Its twenty-one

chapters cover the whole field, from the organization of the medical school, its selection of students, its educational program and facilities, and its finances down to a discussion of recent developments. The appendices contain statistical data and a description of the medical schools in the United States and Canada.

Modern Medicine in the United States. By S. Adolphus Knopf, M. D., formerly Professor of Phthisiotherapy, New York Post-Graduate Medical School. Pp. 40. Paper. New York: Potts Memorial Hospital for Rehabilitation, 1939.

This is a little essay on present conditions facing the medical profession and is chiefly concerned with an attack on socialized medicine. It is interesting and informative.

Psychopathia Sexualis. By Richard von Krafft-Ebbing, M. D., one-time Professor of Psychiatry, University of Vienna. Pp. 626. Cloth. Price, \$3.00. New York: Pioneer Publications, 1939.

This is a reprinting of the book which founded modern sexual pathology, in 1886. Dr. Victor Robinson, Professor of History of Medicine, Temple University, adds a new Introduction and Supplement. The present reprinting makes available again this pioneer source-book.

The Fight on Cancer. By Clarence T. Little, Sc. D., Managing Director, American Society for the Control of Cancer. Pp. 31. Paper. Price, ten cents. New York: Public Affairs Committee, 1939.

This is Pamphlet No. 38 of a series devoted to social and economic problems of general public interest. This one on cancer follows the usual pattern of such documents intended for lay consumption. The statements are authoritative. To those who cannot visualize statistics the six pictographs may be of assistance.

Citrus Fruits and Health. Florida Citrus Commission. Paper. Pp. 73. Lakeland, Florida, 1939.

This little brochure contains clinical and scientific data concerning nutrition as related to citrus fruits, and covers the field rather fully. The bibliography is quite complete. The work will prove of value to nutritionists.

